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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HUYNH, KIM T

ART UNIT PAPER NUMBER

2112

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Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary

Application No.

09/749,585

Applicant(s)

HEITKAMP, ROSS SUYDAM

Examiner

Kim T. Huynh

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-8, 17-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Jaramillo et al. (US Patent 6,598,104)

As per claims 1, 18, Jaramillo discloses a system for selecting bus mastership in a multi-master system, comprising:

- A plurality of master devices configured to generate control signals relating to control of a bus in the multi-master system; and (col. 5, lines 52-62)
- A plurality of slave devices connected to the master devices via the bus, each of the slave devices being configured to; (col.4, lines 33-37), (fig.4)
- Receive the control signals from the master devices, (col.5, lines 52-62)
- Determine whether a conflict exists based on the control signals,(col.5, lines 52-62)

- Generate one or more alternate control signals for selecting bus mastership when a conflict is determined to exist, and (col.5, line 52-col.6, line 40)
- Determine which of the master devices obtains control of the bus using the one or more alternate control signals when a conflict is determined to exist. (col.5, line 52-col.6, line 40)

As per claim 2, Jaramillo discloses wherein the control signals indicate that two or more of the master devices concurrently assert control of the bus and generate a conflict indication signal when two or more of the master devices concurrently assert control of the bus, and conflict resolution logic configured to generate the one or more alternate control signals in response to the conflict indication signal.(col.5, line 52-col.6, 40)

As per claim 23, Jaramillo discloses a method for selecting bus mastership in a multi-master system comprising a plurality of master devices connected to a plurality of slave devices via at least one bus, the method, performed by each of the slave devices, comprising:

- Determining whether control signals from the master devices indicate that two or more of the master devices concurrently assert bus mastership; (col.6, lines 17-39)
- Generating one or more alternate control signals to identify which of the master devices obtains bus mastership when two or more master devices concurrently assert bus mastership; (col.6, lines 18-67)

- Determining which of the master device obtains bus mastership using the one or more alternate control signals when two or more of the master devices concurrently assert bus mastership; and (col.6, lines 18-67)
- Determining which of the master devices obtains bus mastership using the control signals when one of the master devices asserts bus mastership. (col.6, lines 51-67)

As per claims 3,19, 24, Jaramillo discloses wherein the one or more alternate control signals include a bus switch signal that indicates whether a change in control of the bus is to occur and a bus select signal that indicates which of the master devices is to be granted control of the bus.(col.6,lines 51-67)

As per claims 4,22, Jaramillo discloses wherein each of the slave devices comprises:

Bus selection logic configured to determine whether the control signals indicate that none of the master devices asserts control of the bus and maintain a previous grant of control of the bus when none of the master devices asserts control of the bus. (col.8,lines 15-35)

As per claim 5, Jaramillo discloses wherein each of the slave devices is further configured to determine which of the master devices obtains control of the bus based on the control signals when no conflict is determined to exist. (col.9, lines 6-20)

As per claims 6,20,25, Jaramillo discloses wherein the control signals include a present signal indicates whether a corresponding one of the master is operating

and a master signal that indicates whether a corresponding one of the master devices assert control of the bus. (col.5, line 52-col.6, line 40)

As per claims 7,21, 26, Jaramillo discloses wherein the control signals include a master signal that indicates whether a corresponding one of the master devices asserts control of the bus. (col.5, line 52-col.6, line 40)

As per claims 8,17, Jaramillo discloses a system for selecting a master in a multi-master system, comprising:

- Means for outputting first and second control signals relating to mastership in the multi-master system from each of a plurality of masters in the multi-master system; (col.5, lines 52-62)
- Means for determining whether a conflict for mastership exists based on the first and second control signals; (col.5, line 52-col.6, line 40)
- Means for generating a switch signal and a select signal when a conflict is determined to exist; and (col.5, line 52-col.6, line 40)
- Means for selecting one of the masters using the switch signal and the select signal. (col.5, line 52-col.6, line 40)

As per claim 27, Jaramillo discloses a multi-master system, comprising:

A plurality of master devices configured to generate control signals relating to bus mastership;

- Conflict resolution logic configured to receive the control signals from the master devices, determine whether the control signals indicate that two or more of the master devices concurrently assert bus mastership, and

generate a switch signal and a select signal when it is determined that two or more of the master devices concurrently assert bus mastership; and
(col.6, lines 18-67)

- A plurality of slave devices configured to select bus mastership using the switch signal and the select signal when the control signals indicate that two or more of the master devices concurrently assert bus mastership.
(col.6, lines 18-67)

3. Claims 9-16, 28-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Cranston et al. (US Patent 6,253,269)

As per claim 9, Cranston discloses a method for selecting a bus in a multi-bus system, comprising:

- Generating control signals relating to bus selection in the multi-bus system; (col.3, line 52-col.4, line 6)
- Determine whether a conflict for bus selection exists based on the control signals; (col.3, line 52-col.4, line 22)
- Generating one or more alternate control signals when a conflict is determined to exist; and (col.7, lines 17-37)
- Selecting a bus using the one or more alternate control signals. (col.7, lines 17-56)

As per claim 10, Cranston discloses wherein the determining includes:

- Determining whether the control signals indicate that two or more of the buses are to be selected concurrently, and (col.3, line 52-col.4, line 22), (col.7, lines 7-37)
- Generating a conflict indication signal when the control signals indicate that two or more of the buses are to be selected concurrently. (col.3, line 52-col.4, line 22), (col.7, lines 7-37)

As per claim 11, Cranston discloses wherein the generating one or more alternate control signals includes generating the one or more alternate control signals in response to the conflict indication signal.(col.3, line 52-col.4, line 22), (col.7, lines 7-37)

As per claim 12, Cranston discloses wherein the one or more alternate control signals include a bus switch signal that indicates whether a change in bus selection is to occur and a bus select signal that indicates which of the buses is to be selected. (col.7, lines 7-37), (col.2, lines 18-32)

As per claim 13, Cranston discloses the method further comprising determining whether the control signals indicate that the buses are idle; and (col.7, lines 7-28)
Maintaining a previous bus selection when the control signals indicate that the buses are idle. (col.8, lines 1-23)

As per claim 14, Cranston discloses the method further comprising selecting a bus using the control signals when no conflict is determined to exist. (col.7, lines 7-37)

As per claim 15, Cranston discloses wherein the control signals include a present signal that indicates whether a corresponding bus is operating and a master signal that indicates whether a corresponding bus is to be used. (col.7, lines 7-56)

As per claim 16, Cranston discloses wherein the control signals include a master signal that indicates whether a corresponding bus is to be used. (col.7, lines 7-56)

As per claim 28, Cranston discloses a multi-bus system, comprising:

- A plurality of buses; (col.4, lines 40-50)
- A plurality of master devices corresponding to the buses, each of the master devices controlling a corresponding one of the buses, the master devices generating control signals that indicate which of the buses is an active bus; and (col.4, lines 40-67), (col.7, lines 7-56)
- A plurality of the slave devices connected to each of the buses and configured to receive the control signals, determine whether the control signals indicate that two or more of the buses are declared active buses, and select one of the buses when the control signals indicate that two or more of the buses are declared active buses. (col.4, lines 40-67), (col.7, lines 7-56)

As per claim 29, Cranston discloses wherein the slave devices are further configured to generate alternate control signals when the control signals indicate

that two or more of the buses are declared active buses and select one of the buses using the alternate control signals.(col.7, lines 7-56)

As per claim 30, Cranston discloses the multi-bus system further comprising conflict resolution logic configured to receive the control signals, determine whether the control signals indicate that two or more of the buses are declared active buses, and generate a plurality of alternate control signals when it is determined that two or more of the buses are declared active buses.(col.7, lines 7-56)

As per claim 31, Cranston discloses wherein the slave devices are configured to select one of the buses using the alternate control signals.(col.3, lines 32-67)

Response to Amendment

4. Applicant's amendment filed on 3/18/04 have been considered but are deemed to be moot in view of the new grounds of rejection.

a. In response to applicant's argument that Smith does not teach or suggest a plurality of slave devices connected to a plurality of master devices via a bus, wherein each slave device is configured to receive control signals from the master devices, determine whether a conflict exists. However, Jaramillo discloses the system includes master devices, slave devices and arbiter adapted to be coupled to a bus(fig.4); master accesses target, arbitration for bus ownership, receiving a grant signal and informing target. The target issues a first signal or bus denial signal that indicates retry to master. Which permit bus to be available for use by other masters. (col.5, line 52-col.6, line 40)

b. In response to applicant's argument that Smith does not teach or suggest the control signals that indicate which of the buses is an active bus. However, Cranston discloses the arbiter can be programmed to identify active communication buses, determine a failed communication bus and allow access to a backup communication bus. (col.6, lines 50-53), (col.4, lines 40-67)

Thus, the prior art teaches the invention as claimed and the amended claims do not distinguish over the prior art as applied.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. *Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703)305-5384 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 8:30AM- 6:30PM.*

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815 or via e-mail addressed to [mark.rinehart@uspto.gov]. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5631.



Kim Huynh

May 28, 2004

Khanh Dang
Primary Examiner